

Climate projects

Louis Bolk Institute

- Independent institute
- Soil, Plant, Livestock, Nutrition and Public health
- 65 employees
- Approach:
 - Holistic
 - Participative
(in cooperation with farmers / companies)

Project 1: Farmer & Climate

- Network of 16 farmers
- Goal: climate neutral and economically sustainable
- Subjects: feeding system, kind of feeding, energy consumption, organic matter build-up, GHG-emissions

Project 2: 'Buffer farmers'

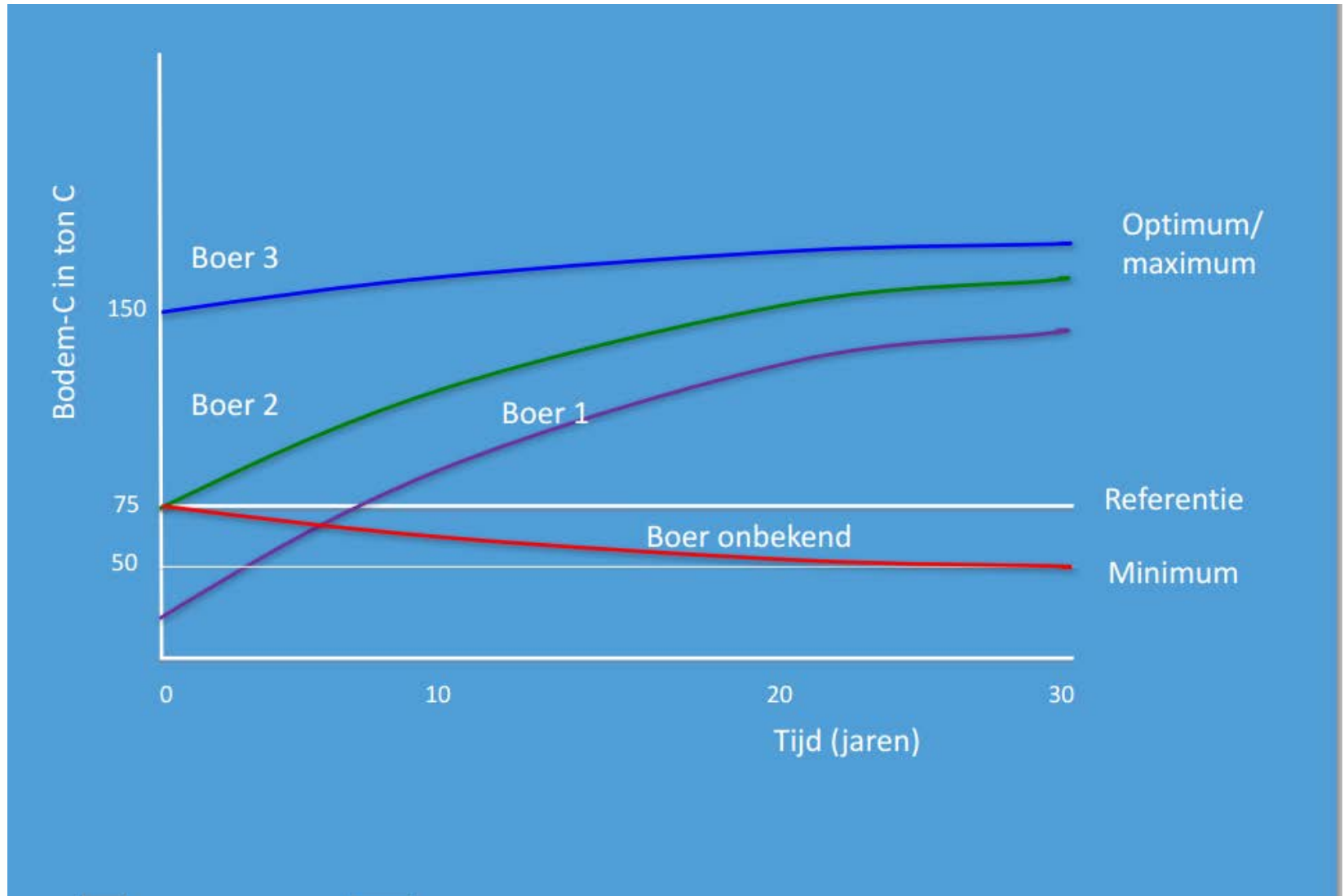
- Topic: increase of water availability for farmers and society
- Goal: integral package of measures for hydrology, organic matter, crop choice, rooting
- No tillage, green manures, etc.
- Movement from water to climate change

Project 3: 'Credits for Carbon Care'



- LBI, CLM, Alterra
- Goals:
 - Identifying applicable measures for C-sequestration in agriculture
 - Preparing a system for quantifying and payment of sequestration
 - Build up support with stakeholders: food industry, agriculture, financial sector, authorities, NGO's

C-levels: stock and flux



Basis for payment:



- Stock and flux
- Upto reference value:
requirement: C-increase
→ payment 1
- Above reference value:
requirement:
C-increase or maintaining balance
→ payment 2



Payment

- Payment for stock dependent on:
 - Actual C-stock
 - Reference C-stock
 - Time (preventing C-emissions)
- Payment for flux dependent on:
 - Realisation of a positive C-balance

Deliverables:

- Online Tool (based on Roth-C-model)
- Reports:
 - Economic effects of increasing organic matter content in soil
 - The challenge of measuring, monitoring and added value of soil-C
 - Guideline good C-management

Project 4: 'Clover for Climate'

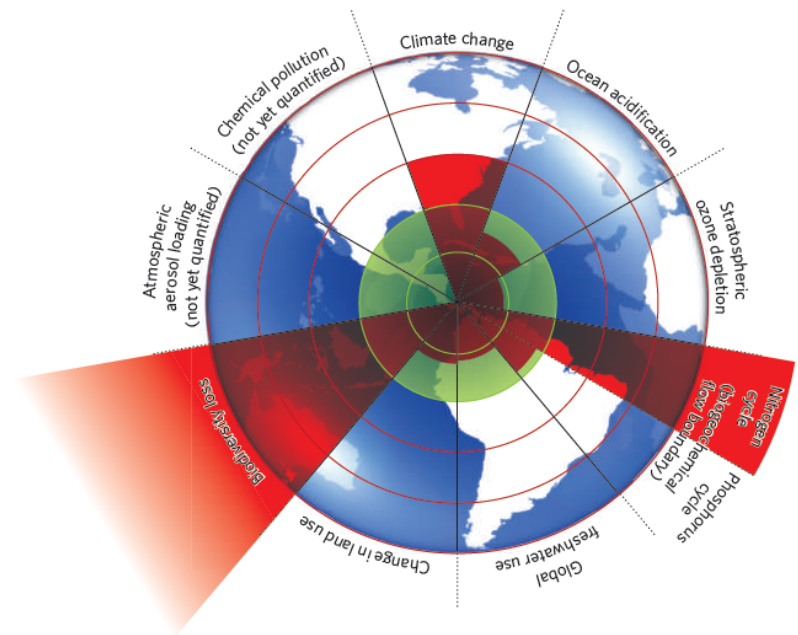
- Goal: to demonstrate the advantages of grass-red clover mixtures
- Higher production without artificial fertilizer (with subsequent emissions of N_2O and CO_2)
- Nearly 100 farmers ordered grass-red clover mixtures
- Preliminary results: 14,8 instead of 12,6 tonnes of dry matter

Questions:

1. What is estimated global temperature in 2100 (IPCC, IEA)?
...°C
2. What is scientifically regarded as the maximum temperature increase to be allowed?
...°C

Project 5: 'Nothing but good about the crisis'

- Motivation: contradiction between urgency and behaviour
- Topic: Climate change and Biodiversity loss
- 25 interviews, book and meetings
- Financial support of Ministries of Agriculture and Environment



Persons interviewed:

- NL: former (vice) prime ministers, scientists, experts from industry, authorities, NGO's
- International:
 - James Hansen (NASA),
 - Jane Goodall,
 - representatives from PepsiCo and RWE

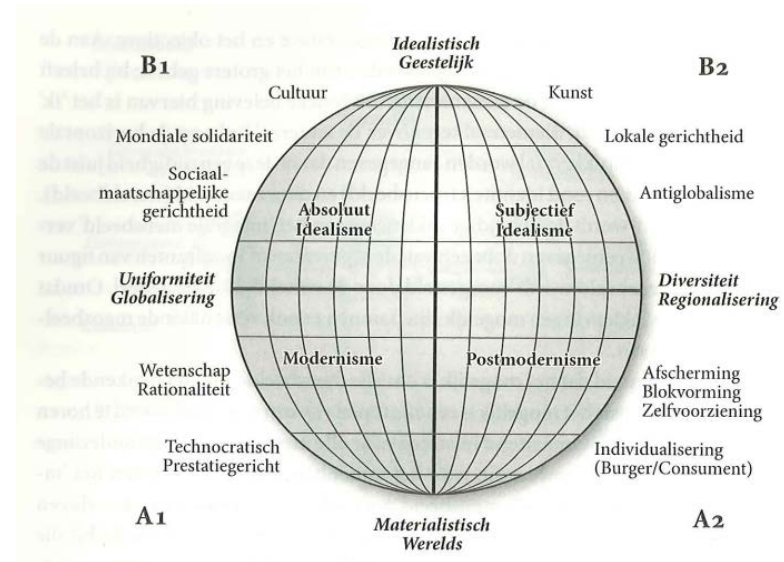
Bottle necks

- New, global problems for which we don't have a solution yet:
we have no idea how to manage these problems
- Current, outdated political / administrative system is not able to manage the problem
- Vacuum of initiative and leadership (government, industry, NGO's, civilians)
- Focus on short term, individualism, materialism

Story of urgency & hope

Crisis might force us to change to another system; more balancing with attention for:

- Consciousness
- Personal leadership
- ‘Sharing is caring’
- Long-term



Figuur 3.7 Het integrale wereldbeeld.

Meetings 2013

1. Book presentation to Secretary of State of Ministry of Environment
2. Topic: Agriculture and Food
3. Topic: Circular Economy.

Project 6: 'Network Organic: climate neutral'

- 60 organic farmers
- Goal: > climate neutral on farm level
- Arable farmers: some with excellent organic matter management
(green manures, non ploughing, compost)
- Dairy farmers: better pasture management
- Poultry and pig farmers: reducing energy use and better manure treatment

Thank you!

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